

W, X, Y, and Z are each independently selected from the group consisting of hydrogen, alkanoyl, aroyl, and trifluoroalkanoyl; and

a second amount of (-)-2'-deoxy-3'-thiocytidine-5'-triphosphate; and

a pharmaceutically acceptable carrier, diluent, or excipient.

75. The pharmaceutical composition of claim 74, wherein said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is selected from the group consisting of:

N-(n-hexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(n-heptyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(n-octyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(n-octyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;
N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;
N-(n-decyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;
N-(n-undecyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;
N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(n-decyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(n-undecyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(n-dodecyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(2-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(4-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(5-methylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(3-propylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(1-pentylpentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(1-butylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(7-methyloctyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(8-methylnonyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(9-methyldecyl)-1,5-dideoxy-1,5-imino-D-glucitol;

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N-(10-methylundecyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(6-cyclohexylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(4-cyclohexylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(2-cyclohexylethyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(1-cyclohexylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(1-phenylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(3-phenylpropyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(3-(4-methyl)-phenylpropyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(6-phenylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(n-decyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(n-undecyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(n-dodecyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(2-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(4-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(5-methylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(3-propylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(1-pentylpentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(1-butylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(7-methyloctyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;
N-(8-methylnonyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutryate;

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N-(9-methyldecyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;

N-(10-methylundecyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;

N-(6-cyclohexylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;

N-(4-cyclohexylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;

N-(2-cyclohexylethyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;

N-(1-cyclohexylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;

N-(1-phenylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;

N-(3-phenylpropyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates;

N-(3-(4-methyl)-phenylpropyl)-1,5-dideoxy-1,5-imino-D-
glucitol, tetrabutyrates; and

N-(6-phenylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,
tetrabutyrates.
